

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: THORNDIKE POND	Lake Area (ha):	107.24
Town: JAFFREY	Maximum depth (m):	7.0
County: Cheshire	Mean depth (m):	3.4
River Basin: Merrimack	Volume (m ³):	3513500
Latitude: 42°51'37" N	Relative depth:	0.6
Longitude: 72°03'17" W	Shore configuration:	1.65
Elevation (ft): 1159	Areal water load (m/yr):	5.67
Shore length (m): 6000	Flushing rate (yr ⁻¹):	1.70
Watershed area (ha): 1036.0	P retention coeff.:	0.64
% watershed ponded: 0.7	Lake type:	natural w/dam

BIOLOGICAL:

16 February 1999

20 July 1998

DOM. PHYTOPLANKTON (% TOTAL)	#1	NO WINTER PLANKTON	CHRYOSOPHAERELLA 35%
	#2	ANALYZED	DINOBYRON 30%
	#3		SYNURA 12%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			4.58
DOM. ZOOPLANKTON (% TOTAL)	#1		NAUPLIUS LARVA 39%
	#2		KERATELLA 23%
	#3		CALANOID COPEPOD 18%
ROTIFERS/LITER			56
MICROCRUSTACEA/LITER			133
ZOOPLANKTON ABUNDANCE (#/L)			189
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			3.5
BOTTOM DISSOLVED OXYGEN (mg/L)		10.5	2.1
BACTERIA (E. coli, #/100 ml)	#1		1
	#2		< 1
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: THORNDIKE POND

Town: JAFFREY

	16 February 1999		20 July 1998		
DEPTH (m)	1.0	3.5	2.0		4.5
pH (units)	5.6	5.6	6.4		6.0
A.N.C. (Alkalinity)	1.7	1.6	1.8		2.6
NITRATE NITROGEN	0.07	0.07	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.10	0.10	0.20		0.20
TOTAL PHOSPHORUS	0.006	0.007	0.009		0.007
CONDUCTIVITY (μ mhos/cm)	31.6	33.7	27.7		27.6
APPARENT COLOR (cpu)	7	8	17		21
MAGNESIUM			0.44		
CALCIUM			1.4		
SODIUM			2.8		
POTASSIUM			< 0.40		
CHLORIDE	4	4	4		3
SULFATE	4	4	3		3
TN : TP	28	24	22		29
CALCITE SATURATION INDEX			4.5		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

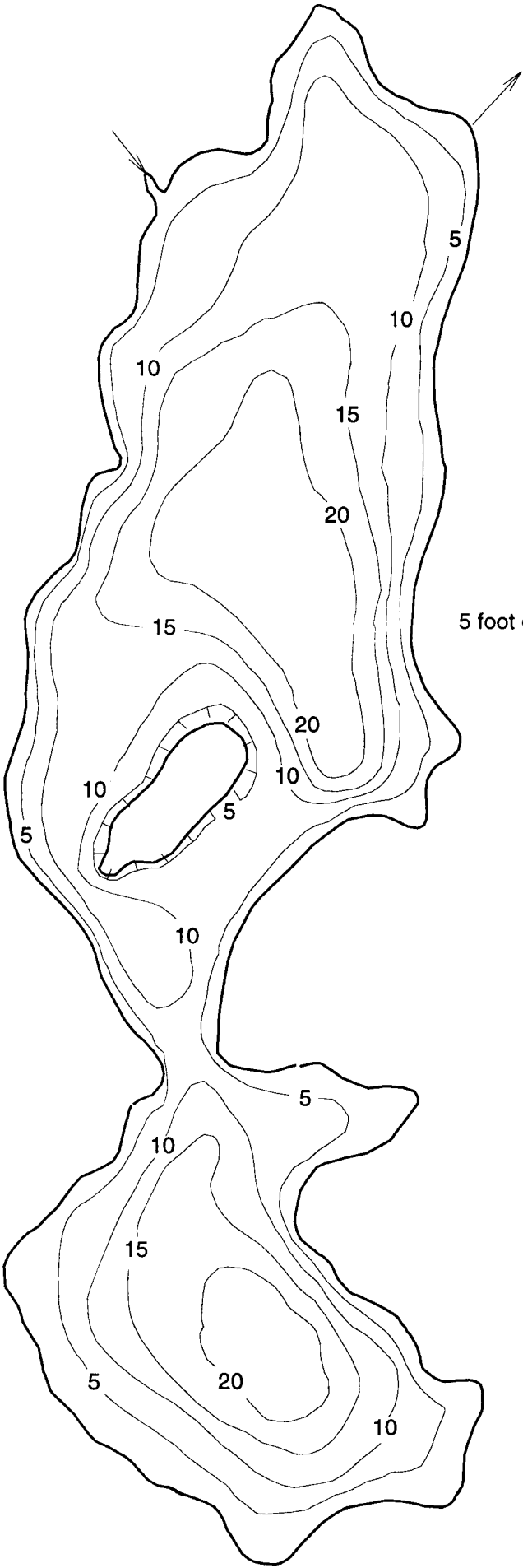
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	1	1	4	Oligo.

COMMENTS:

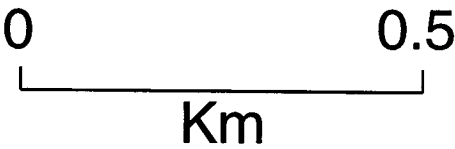
1. This pond was previously surveyed and classified in 1982. There was no change in trophic class and little change in trophic quality between the two dates.
2. Thorndike Pond has participated in V LAP since 1990. Chlorophyll has shown a slight increasing trend but values remain low. Other trophic parameters (Secchi depth and phosphorus) have remained stable during this time.
3. This is a moderately acidic, clear-water oligotrophic pond.
4. Boat launch was present at the northern end of the pond near the inlet and a juvenile camp. The launch is steep, paved to the waterline and has parking for 4 to 5 vehicles and trailers.

Thorndike Pond

Jaffrey



5 foot depth contours



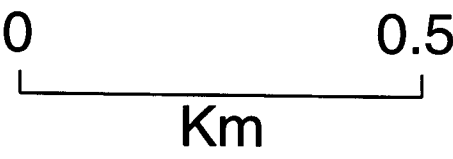
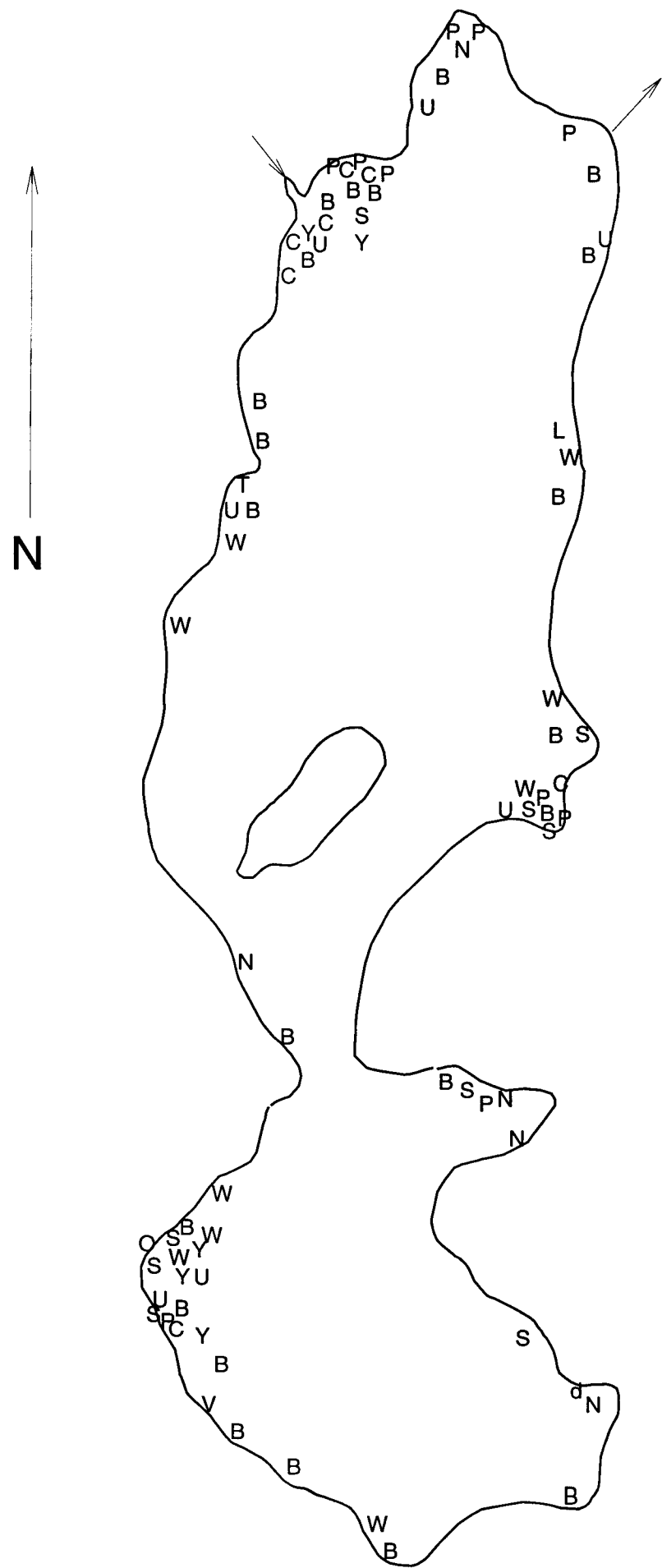
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COMMENTS :

*Dissolved oxygen values are in mg/L

Thorndike Pond

Jaffrey



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